SOME REFLECTIONS ON MONETARY INSTITUTIONS AND EXCHANGE-RATE REGIMES

Steven H. Hanke*

1. INTRODUCTION

Chairman Allan Meltzer requested that I present an overview of my thoughts on exchange-rate regimes. I will do this as briefly as possible, with an emphasis on emerging market countries and what I consider to be some of the more important points that merit your consideration. For more details, allow me to refer you to the two papers Professor Meltzer has distributed to the Advisory Commission (S.H. Hanke, "Some Reflections on Currency Boards," in: M.I. Blejer and M. Skreb. Central Banking, Monetary Policies, and the Implications for Transition Economies, Boston: Kluwer Academic Publishers, 1999 and S.H. Hanke, "Dollarization for Argentina," Journal of Applied Corporate Finance, Vol.12, No.1, Spring 1999). In addition, my testimony contains other references that might be of interest and use.

2. THE WORLD'S CHANGING CURRENCY LANDSCAPE

To put my reflections into perspective, it is instructive to consider recent changes in the world's currency landscape. Its morphology has been in a state of flux during the decade of the 1990s. The continued liberalization of international capital flows mixed with pegged exchange rates has proven to be a deadly cocktail. Indeed, volatile hot money flows have battered pegged exchange rate regimes, causing volcanic-like eruptions in the European Exchange Rate Mechanism (1992 and 1993), the CFA franc (1994), the Turkish lira (1994), the Mexican peso (1994-95), the Thai baht and the other Asian currencies (1997-98), the Russian ruble (1998) and the Brazilian real (1999).

* **The Johns Hopkins University, Baltimore, Maryland 21218**
e-mail: hanke@jhurms.hcf.jhu.edu

Balkanization has also been a prominent force in the 1990s. With the collapse of the Soviet Union, a large unified currency area was dismembered. In consequence, 15 national currencies officially circulate where the ruble once ruled the roost. Much of the same occurred after Yugoslavia broke apart. Now six currencies circulate as legal tender in a region where one currency used to do the job.

The last time currency balkanization occurred on such a ground scale in Europe was during the monetary chaos that followed World War I. In 1914, Europe had ten currencies, all with fixed gold parities and fixed exchange rates. By 1920, Europe had twenty-seven paper currencies, none with a gold parity or a fixed exchange rate.

Even more dramatic than the trend toward balkanization has been that of unification. Argentina, Estonia, Lithuania, Bulgaria and Bosnia have unified their domestic currencies with stronger anchor currencies by establishing currency board systems (CBSs), or what I refer to as currency board-like systems. And in 1998, Indonesia and Russia flirted with CBS proposals.

These two CBS episodes merit attention for the light they shed on the international politics of currency reform and the role played by the U.S. Department of the Treasury and the IMF. The Clinton administration was determined to mortally wound or topple President Suharto, and it was betting on monetary chaos to do the job. When President Suharto embraced the CBS idea in February 1998, the U.S. Treasury and its stalking horse, the IMF, panicked because they thought the CBS would stabilize the rupiah and elevate Suharto to the status of a Javanese god. This explains why the U.S. Treasury and the IMF mounted a swift and massive counterattack. Although the counterattack never reached the level of analysis — it began and ended with ad hominem attacks on me in the popular press (I was operating as Suharto's chief economic advisor at the time.) — it was effective.

At Suharto's side during most of the CBS episode, I was well aware of the Clinton administration's end-game. (S.H. Hanke, "How I Spent My Spring Vacation," The International Economy, July/August 1998). And since then, many leaders in Asia and elsewhere have come to realize why there was such an uproar over a CBS for Indonesia. Indeed, Mr. Paul Keating, the former Australian Prime Minister, recently stated that "the United States Treasury quite deliberately used the economic collapse as a means of bringing about the ouster of President Suharto" because that was a key policy aim of the Clinton administration (AFP, November 11, 1999). And surprisingly, this judgement was confirmed by none other than Mr. Michel Camdessus, the former managing director of the IMF, when he stated that "we created the conditions that obliged President Suharto to leave his job" (David E. Sanger, "Longtime IMF Director Resigns In Midterm," New York Times, November 10, 1999).

The Russian story was quite different from Indonesia's. In August 1998, the Clinton administration was desperately trying to prop up the ruble and President Yeltsin. That's why a CBS for Russia was viewed in a favorable light by the U.S. Treasury and the IMF. They knew that a CBS had provided a quick and sustainable fix for the hyperinflating Bulgarian lev in July 1997. Incidentally, as President Petar Stoyanov's economic advisor, I can attest to the fact that Bulgaria's CBS was virtually mandated by the Clinton administration and the IMF because they wanted to ensure the success of the newly elected Kostov government.

On January 1, 1999, eleven European countries embarked on the greatest monetary experiment of the century. That's when they unified their national currencies and replaced them with a new currency, the euro. This currency unification was accomplished by establishing a monetary union. The European Monetary Union has been followed by calls to establish other monetary unions, most notably in the Mercosur and Asian regions.

If all these changes in the world's currency landscape weren't dramatic enough, in January 1999, President Carlos Menem suggested that Argentina make its monetary unification with U.S. complete by dumping its CBS and replacing the peso with the U.S. dollar. Although President Menem had threatened to dollarize Argentina in 1996, only the speculators took note. That was not the case in 1999, when President Menem's proposal set off a worldwide debate about dollarization. Indeed, even the U.S. Congress has held hearings on dollarization and the House and Senate Banking Committees are reviewing dollarization legislation (H.R. 3493 and S.1879). And to top it off, late in 1999, three locales – Kosovo, East Timor and Montenegro – granted foreign currencies legal tender status. As we enter the new millenium, the "dollarization" option remains a front-burner issue in Latin America, Eastern Europe, the Balkans and parts of South East Asia.

3. EXCHANGE RATE REGIMES

There are three types of exchange-rate regimes: floating, fixed and pegged rates. Each type has different characteristics and generates different results (see Table 1). Although floating and fixed rates appear to be dissimilar, they are members of the same family. With a floating rate, a monetary authority sets a monetary policy, but has no exchange-rate policy—the exchange rate is on autopilot. In consequence, the monetary base only contains a domestic component which is determined by a monetary authority. Whereas, with a fixed rate, a monetary au-

thority sets the exchange rate, but has no monetary policy—monetary policy is on autopilot. In consequence, under a fixed-rate regime, the monetary base only contains a foreign component which is determined by the balance of payments. In other words, when a country's official net foreign reserves increase, its monetary base increases and vice versa. With both of these exchange-rate mechanisms, there cannot be conflicts between exchange-rate and monetary policies, and consequently, balance of payments crises cannot occur. Indeed, under floating and fixed-rate regimes, market forces act to automatically rebalance financial flows and avert balance of payments crises.

While both floating and fixed-rate regimes are equally desirable in principle, it must be stressed that floating rates, unlike fixed rates, do not perform well in developing countries because these countries usually lack a strong rule of law, have weak monetary authorities and histories of monetary instability. In consequence, monetary authorities in developing countries have great difficulty in imposing rules that control the growth in the base money. Not surprisingly, currencies in developing countries rarely float on a sea of tranquility. Knowledge of this fact would, no doubt, have prompted IMF Deputy Managing Director Stanley Fischer to temper his remarks concerning Indonesia's float of the rupiah. On the day of the float, August 14, 1997, Dr. Fischer proclaimed that "The management of the IMF welcomes the timely decision of the Indonesian authorities. The floating of the rupiah, in combination with Indonesia's strong fundamentals, supported by prudent fiscal and monetary policies, will allow its economy to continue its impressive economic performance of the last several years." (IMF News Brief, No. 97/18, August 14, 1997). Dr. Fischer failed to realize that the Bank of Indonesia had no rules to regulate the growth in base money. In consequence, by January 1998, the rupiah currency in circulation was growing by over 35% per month and the rupiah's exchange rate was collapsing at a rate unprecedented for a currency in a country not subject to a war, a fiscal crisis or a hyperinflation.

Fixed and pegged rates appear to be the same. However, they are fundamentally different. Pegged rates, such as those that were employed throughout most of Asia and in Russia and Brazil before the recent currency crises, require a monetary authority to manage both the exchange rate and monetary policy. With a pegged rate, the monetary base contains both domestic and foreign components. Unlike floating and fixed rates, pegged rates invariably result in conflicts between exchange rate and monetary policies. For example, when capital inflows become "excessive" under a pegged system, a monetary authority often attempts to sterilize the ensuing increase in the foreign component of the monetary base by reducing the domestic component of the monetary base. And when outflows become "excessive," an au-

thority attempts to offset the decrease in the foreign component of the base with an increase in the domestic component of the monetary base. Balance of payments crises erupt as a monetary authority begins to offset more and more of the reduction in the foreign component of the monetary base with domestically created base money. When this occurs, it's only a matter of time before currency speculators spot the contradictions between exchange rate and monetary policies and force a devaluation.

Several points are worth stressing. First, my taxonomy of exchange-rate regimes is totally dependent on the nature of the monetary base in each regime. With a pegged regime — whether it be a managed float, a band, a crawling peg or an adjustable peg — the monetary base can be decomposed into a domestic and foreign component. Chart 1 illustrates this decomposition for Turkey. Recall that in 1994, when the Turkish lira's peg blew apart, the foreign component of the monetary base fell and was more than offset by an explosion in the domestic component. With a floating regime, the monetary base only contains a domestic component and with a fixed regime the base only contains a foreign component. In consequence, with either a floating or a fixed regime, the monetary base cannot be decomposed.

The second point concerns the instability of pegged regimes and the inevitability of their collapse. My analysis of these regimes assumes that there are no effective exchange and capital controls, something that I deem to be highly desirable. Under these conditions, pegged regimes give rise to volatile hot money flows and currency crises. To avoid currency crises with open exchange and capital flows, pegged rates must be abandoned. Alternatively, if pegged rates are employed, they must be coupled with exchange and capital controls, if crises are to be avoided.

China has chosen to protect its pegged regime by using this latter option. And although I don't approve of this strategy, I have predicted that it will work to protect the renminbi from a devaluation (S.H. Hanke, "The Renminbi Revisited," Friedberg's Commodity and Currency Comments, Vol.20., No.4, August 2, 1999).

China made several policy changes in June 1999 that merit our attention. All these changes are designed to arrest the deflation, boost nominal GDP and hopefully real GDP, and at the same time, protect the renminbi's peg.

To accomplish these objectives, China embarked on a strategy of monetary easing, with an interest rate cut on June 10th. A monetary easing should eventually put downward pressure on the renminbi. A relatively easy monetary policy should also put downward pressure on the black market for the renminbi, as speculators chase higher yields in assets denominated in foreign currencies and exploit loopholes in China's exchange controls.

China, in its simultaneous pursuit of an independent monetary policy and a pegged renminbi, has anticipated all this. Consequently, it has built a fortress around its foreign exchange control regime by closing the remaining loopholes in the system. On June 3rd, it ordered foreign banks with renminbi accounts at Chinese banks to close those accounts by June 10th. It also said that offshore renminbi could no longer be converted into foreign currencies or remitted to China. This means that the 2% of Chinese international trade (imports plus exports) that was conducted in renminbi will no longer be permitted to be conducted in the Chinese currency. It also means that the renminbi held offshore, which were fully convertible at overseas branches of Chinese banks, will no longer be convertible. And if the closing of these loopholes was not enough, the authorities have begun to crack down on money laundering and illegal capital flight. Starting on August 1st, Chinese citizens wishing to take more than $10,000 cash out of the country will have to apply for a license.

It is clear that the authorities plan to play hard ball under the new exchange – control regime, too. On July 30th, the State Administration of Foreign Exchange announced that its massive enforcement campaign was bearing fruit. During June, more than 260 people engaged in illegal foreign exchange trading were arrested, more than fifty trading sites were smashed and large amounts of foreign currency were confiscated. Not surprisingly, the black market RMB/$ rate has tightened.

While the western press has focused on the implications of China's abandonment of its "no devaluation pledge," the 1,100 officially registered Chinese newspapers and over 8,000 magazines have been deafeningly silent about a devaluation. This does not surprise me. The real story is that China has begun to pursue an independent, easy monetary policy, and that it is coupled with a beefed up fortress around China's exchange control regime, one designed to protect the renminbi's peg at all cost. In consequence, the devaluation of the renminbi is not imminent and does not pose a threat to other Asian currencies.

Third, after spending the last decade writing and speaking about the exchange-rate regime taxonomy presented above, Washington has finally embraced it (S.H. Hanke, "Two Cheers for Rubin and Summers," Central Banking, Vol X, No.2, 1999-2000). Both former Treasury Secretary Rubin and current Secretary Summers have concluded that floating and fixing are "in" and pegging is "out." Rubin's remarks were made at The Johns Hopkins University on April 21, 1999 and Summers' were made in an address at Yale University on September 22, 1999 (see the U.S. Treasury's website www.ustreas.gov[1]).

Fourth, why not three cheers for Messrs. Rubin and Summers? Because both failed to address the issue of how one should choose between floating and fixing in developing countries. The only way to choose is to adopt Professor Ronald Coase's

methods and conduct a detailed investigation of the actual results of handling the problem with the two options that are equally desirable in principle. When the Coasian method is used, floating quickly drops out of the picture. There have not been floating regimes that have been sustained in any developing countries. Indeed, when started, floating regimes in these countries degenerate into some type of pegged regime because the monetary authorities cannot sustain a money supply rule that produces low inflation and rapid economic growth. In consequence, pegged and fixed-rate regimes are the only types we find in developing countries. And as Table 2 shows, the fixed-rate systems produce lower inflation rates, higher growth rates, and lower fiscal deficits as a percent of GDP than do pegged regimes.

4. SOME MISINFORMED CRITICISM OF CBS AND DOLLARIZATION

In order to maintain their position as the final arbitrators over whether a country can adopt a fixed exchange-rate regime, the powers that reside in Washington hold to the notion that certain preconditions must be satisfied before either CBSs or dollarization can be adopted. The Washington dogma, as stated by the Council of Economic Advisers is: "a currency board is unlikely to be successful without the solid fundamentals of adequate reserves, fiscal discipline and a strong and well-managed financial system, in addition to the rule of law" (The Annual Report of the Council of Economic Advisers. Washington: USGPO 1999, p.289).

This statement is literally fantastic. Indeed, as I have said before, "what nonsense." As a former Senior Economist at the CEA, I am shocked that such an absurd and unsupportable statement could have passed muster at the CEA, an institution that traditionally has had very high "fact-checking" standards. The CEA's statement on preconditions demonstrates how far off base professional economists can get when they fail to carefully study the history, workings and results of alternative institutional arrangements.

At best, few of the so-called preconditions have been met by any countries that have introduced CBSs or dollarized in the 1990s. Indeed, I would go so far as to state that none of the preconditions have been met in the countries that have most recently adopted CBSs or a foreign currency — Bulgaria, Bosnia, Kosovo, East Timor and Montenegro. All were basket cases. And as Table 3 shows, Bulgaria's currency board has been a roaring success, and the one in Bosnia, which was mandated by the Dayton Accords, represents perhaps the only achievement of the that international treaty. The story is much the same for all other CBSs that have

been introduced in the 1990s (S.H. Hanke, "Monetary Stability for Economies in Transition," Zagreb Journal of Economics, Vol.3, No.3, 1999).

In the historical context, it is important to mention that the so-called preconditions argument has never held water. Indeed, since the first currency board was installed in 1849, no currency board has ever failed to produce a stable, fully convertible currency. And that includes cases in which none of the so-called preconditions were met, a notable example being the North Russian currency board that was designed by none other than John Maynard Keynes in 1918 (S.H. Hanke and K. Schuler, "Keynes's Russian Currency Board," in: S.H. Hanke and A.A. Walters. Capital Markets and Development, San Francisco: ICS Press, 1991). It also includes cases in which all the preconditions were met, notably with reintroduction of Hong Kong's currency board in 1983.

Also unsupported by the application of a Coasian methodology are claims that CBSs or dollarization will fail to produce deserved results because they don't protect countries from external shocks; they don't have adequate lender of last resort facilities; and they are not part of optimal currency areas; and they cannot be established because countries don't have adequate foreign reserves. (see Culp, Hanke and Miller below).

5. INDONESIA

My experience in Indonesia was quite interesting. Indeed, a real education in the politics of currency reform. Christopher Culp, Merton Miller and I addressed many of the technical aspects of my Indonesian experience and I won't dwell on them here (C.L. Culp, S.H. Hanke and M.H. Miller, "The Case for an Indonesian Currency Board," Journal of Applied Corporate Finance, Vol.11, No.4, Winter 1999).

What is interesting is that no official from any government or the IMF, no professional economist and no journalist ever inquired as to what was contained in my CBS and related proposals which President Suharto called "the IMF-plus program." It is no wonder that we cannot find any analysis of the technical questions raised by the CBS proposal and we can find no mention of the CBS episode in the IMF's account of the Indonesian crisis. The IMF's exercises in revisionist history are truly remarkable. This has astonished me, particularly given all the ink that was spilled on that sorry episode in early 1998. It all reminds me of a quote from the Wallet of Kai Lung: "It is the mark of insincerity of purpose to spend one's time looking for the Sacred Emperor in the low-class tea-shops" (quoted in: R.H. Coase,

"Coase on Posner on Coase," Journal of Institutional and Theoretical Economics, Vol.149, No.1, March 1993).

And to add insult to injury, I read in the Wall Street Journal of today (January 3, 2000) that the Bank of Indonesia is bankrupt. Indeed, it requires a huge infusion of foreign reserves to remain solvent and avoid hyperinflating the rupiah. Would a "dangerous" CBS really have produced this mess?

6. ARGENTINA

When Carlos Menem was first elected President of Argentina in 1989, the economy was in shambles. Since then, his governments have delivered an impressive set of economic reforms. The linchpin for Argentina's economic reforms has been its currency board-like system which was instituted on April 1, 1991. Argentines call this system, and the wider economic reforms it has spurred, "convertibility," an uncommon term for an unusual system.

An orthodox CBS is a monetary institution that issues notes and coins. These notes and coins are backed with a minimum of 100 percent (up to a maximum of 110 percent) of foreign reserve currency, and they are fully convertible into the reserve currency at a fixed exchange rate on demand. In addition, an orthodox CBS cannot act as a lender of last resort, does not regulate reserve requirements for commercial banks, only earns seigniorage from interest on reserves and does not engage in forward-exchange transactions.

Argentina's convertibility system engages in limited lender of last resort activities; it regulates reserve requirements for commercial banks; it can hold up to one-third of the dollar-denominated reserves it keeps to back its monetary liabilities in the form of bonds issued by the government of Argentina; and the Convertibility Law only requires that the central bank's monetary liabilities be covered by a minimum of 100% in dollar-denominated assets. Accordingly, when the central bank's assets exceed its monetary liabilities, the one-to-one link between foreign reserves and the monetary base is broken, indicating discretionary sterilization.

These deviations from currency-board orthodoxy result in less than a perfect unification of the peso and the U.S. dollar. Even though the peso-dollar exchange rate has remained absolutely fixed at 1-to-1, there has often been speculation that the peso will be devalued. Interest rates in pesos have accordingly been persistently higher than interest rates in U.S. dollars within Argentina. Incidentally, all the CBSs of the 1990s, as well as Hong Kong's, also deviate from orthodoxy in

important ways. That is why I refer to them as CBS-like systems. Although these systems look like CBSs, a careful examination reveals that they have many features that are associated with central banks, not orthodox CBSs.

To make their monetary unifications more effective, countries should either reform these CBS-like systems or they should "dollarize."

7. MONTENEGRO

As President Djukanovic's economic advisor, I recommended that Montenegro adopt the German mark as legal tender. They did so on November 2, 1999. I have also recommended that Montenegro install an orthodox CBS because such a system would generate much needed revenue for the government which is operating with a fiscal deficit of about 20% of GDP (Z. Bogetic and S.H. Hanke, The Montenegrin Marka, Podgorica, Montenegro: Antena M Mermont, 1999).

The regime that I have recommended for Montenegro approximates Professor F.A. Hayek's notion of a competitive currency regime (F.A. Hayek, Denationalization of Money – The Argument Refined: An Analysis of the Theory and Practice of Concurrent Currencies, 2nd ed., Hobart Special Paper 70, London: Institute of Economic Affairs, 1978). Under my proposed setup, Montenegro would produce its own currency, the marka, via a Swiss-based orthodox CBS and use it as a unit of account for keeping the government's accounts. And in addition, all other currencies would be legal for private parties to make transactions, contracts and for purposes of keeping their accounts.

The following law — and everything of importance is always contained in the CBS laws, something professional economists rarely dirty their hands with — contains the elements of a Montenegrin CBS and the competitive currency regime I have recommended for Montenegro. It is important to stress that I have opposed all initiatives to issue a Montenegrin marka via a Montenegrin-based CBS or central bank.

1. The Montenegrin Currency Board is hereby created. The purpose of the Board is to issue notes and coins in Montenegrin markas, and to maintain them fully convertible at a fixed exchange rate into a reserve currency as specified in paragraph 6.

2. The Board shall have its legal seat in Switzerland and shall be subject to the laws of Switzerland.

3. a) The Board shall be governed by five directors. Three directors shall be citizens of the Group of Seven countries appointed by the Bank for International Settlements (BIS) in Basel. Two directors shall be appointed by the Government of

Montenegro, with one being a citizen of the Group of Seven countries and one being a citizen of Montenegro. The directors from the Group of Seven countries shall not be employees of governments or multi-governmental organizations.

b) A quorum shall consist of three of the Board's directors, including at least one of the directors chosen by the Government of Montenegro. Decisions shall be by majority vote, except as specified in paragraph 15.

c) The first two directors appointed by the Government of Montenegro shall serve terms of one and four years. The first three directors appointed by the BIS shall serve terms of two, three, and five years. Subsequent directors shall serve terms of five years. Directors may be reappointed once. Should a director resign or die, the BIS shall choose a successor to complete the remainder of the term if the former director was appointed by the BIS, or the Government of Montenegro shall choose the successor if the former director was appointed by the Government of Montenegro.

4. The board of directors shall have the power to hire and fire the Board's staff, and to determine salaries for the staff. The by-laws of the Board shall determine salaries for the directors.

5. The Board shall issue notes and coins denominated in Montenegrin markas. The notes and coins shall be fully convertible into deutschemarks (euros after July 2002). The notes shall be printed outside Montenegro. The Board may accept deposits of deutschemarks (euros after July 2002).

6. a) Initially, the reserve currency shall be the deutschemark, and the fixed exchange rate shall be one Montenegrin marka equal to one deutschemark.

b) Failure to maintain the fixed exchange rate with the reserve currency shall make the Board and its directors subject to legal action for breach of contract according to the laws of Switzerland. This provision does not apply to embezzled, mutilated, or counterfeited notes, coins, and deposits, or to changes of the reserve currency in accord with paragraph 13.

7. The Board shall charge no commission for exchanging Montenegrin markas for the reserve currency, or the reverse.

8. The Board shall begin business with foreign reserves equal to at least 100 per cent of its notes and coins in circulation and deposits with it. It shall hold its foreign reserves in securities or other forms payable only in deutschemarks or euros. These reserves shall be held on deposit at the BIS. The Board shall not hold securities issued by the national or local governments of Montenegro, or by enterprises owned by those governments.

9. The Board shall pay all net seignorage (profits) into a reserve fund until its unborrowed reserves equal 110 per cent of its notes and coins in circulation and

deposits. It shall remit to the Government of Montenegro all net seignorage beyond that necessary to maintain 110 per cent reserves. The distribution of net seignorage shall occur annually.

10. The head office of the Board shall be in Podgorica. The Board may establish branches or appoint agents in other cities of Montenegro. The Board shall also maintain a branch in Switzerland.

11. The Board shall publish a financial statement, attested to by the directors, monthly or more often. The statement shall appraise the Board's holdings of securities at their market value. An annual audit of the Board shall be made by an international audit firm and shall be published by the Board.

12. The Board may issue notes and coins in such denominations as it judges to be appropriate.

13. Should the annual change in the weighted average of the consumer price index for the member countries of the European Monetary Union fall outside the range – 5 per cent to 20 per cent for more than two years, or – 10 per cent to 40 per cent for more than six months, the Board must, within sixty days, either:

a) devalue (if the change in the index is negative) or revalue (if the change in the index is positive) the Montenegrin marka in terms of the reserve currency by no more than the change in the index during the period just specified, or

b) choose a new reserve currency and fix the exchange rate of the Montenegrin marka to the new currency at the rate then prevailing between the new reserve currency and the former reserve currency.

14. If the Board chooses a new reserve currency in accord with paragraph 13, it must convert all its foreign reserves into assets payable in the new reserve currency within one year.

15. The Board may not be dissolved nor may its assets be transferred to a successor organization unless all of the following conditions are satisfied: 75 percent of the members of the Parliament of Montenegro approve, the President of the Republic of Montenegro approves and all of the directors of the Board approve.

16. The Board may accept loans or grants of reserves from multi-governmental organizations or foreign governments. During the life of the Board, the cumulative value of these loans and grants shall not exceed 130 million deutschemarks valued in 1999 deutschemarks.

17. Exchanges of currency by the Board shall be exempt from taxation by the Montenegrin governments.

18. Both Montenegrin markas and deutschemarks (euros after July 2002) shall be legal tender for paying taxes and settling debts in Montenegro, and these legal-

tender currencies shall be the only currencies used for final settlements in the payments system of Montenegro. However, Montenegrin markas and deutschemarks (euros after July 2002) shall not be forced tender for contracts between private parties. Private parties shall be free to contract among each other in any currencies they wish to specify.

19. The Montenegrin Currency Board Law shall take effect upon its passage by the Parliament of Montenegro. (Note: The Parliament of Montenegro must amend the laws governing the banking system, the payments system and contracts, so that they are in accord with the Montenegrin Currency Board Law).

APPENDIX

Table 1

Exchange Rate Regimes

Type of Regime	Exchange Rate Policy	Monetary Policy	Source of Monetary Base	Conflicts Between Exchange Rate and Monetary Policy	Balance of Payment Crisis
Floating Rate (1)	No	Yes	Domestic	No	No
Fixed Rate (2)	Yes	No	Foreign	No	No
Pegged Rate (3)	Yes	Yes	Domestic and Foreign	Yes	Yes

Notes:

(1) Floating rates are employed in some developed countries.

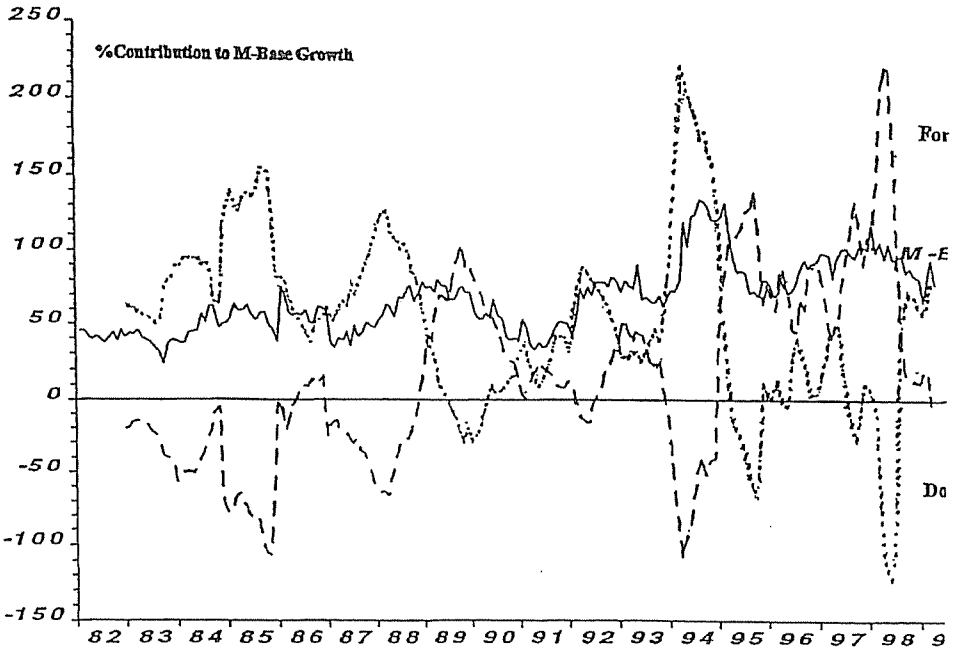
(2) Fixed rates are employed in some developing and developed countries that are "dollarized," employ CBSs or are members of a monetary union.

(3) Pegged rates (managed floats, bands, crawling pegs, adjustable pegs) are employed in most developing countries.

Source: Steve H. Hanke. "How to Establish Monetary Stability in Asia" The Cato Journal, Vol17 No. 3, Winter 1998.

Chart 1

Components of Turkey´s Monetary Base Growth



Source: Steve H. Hanke, "A Turkish Delight?", Friedberg's Commodity and Currency Comments, Vol. 20, No. 6, November 29, 1999.

Table 2

Performance of Fixed vs. Pegged Exchange-Rate Regimes
in 98 Developing Countries (1950-1993)

Variable		Mean	Median	Std. Dev.	Obs.	Min.	Max.
GDP	Complete Sample	1.85	1.90	6.57	3229	-47.40	45.10
Growth	Pegged Rates	1.69	1.90	6.53	2694	-47.40	45.10
Rate	Fixed Rates	2.61	2.60	6.73	535	-32.70	31.80
	Complete Sample	29.38	7.71	185.36	3186	-22.06	4770.35
Inflation	Pegged Rates	33.79	9.10	210.35	2663	-22.06	4770.35
	Fixed Rates	6.95	3.29	47.86	523	-14.95	1075.93
Budget	Complete Sample	3.43	2.50	4.98	2107	-22.62	36.65
Deficit	Pegged Rates	3.66	2.70	5.18	1769	-22.62	36.65
	Fixed Rates	2.22	1.70	3.53	338	-5.81	20.27

Note: The fixed rate category also includes countries that were fully dollarized.

Source: S.H. Hanke, "Some Reflections on Currency Boards," in: M.I. Blejer and M. Skreb. Central Banking, Monetary Policies, and the Implications for Transition Economies, Boston: Kluwer Academic Publishers, 1999.

Table 3

Bulgaria – Before and After Setting Up A Currency Board In 1997

	1996	1998
Annual Inflation	311%	1%
Gross Domestic Product	-10.9%	4.5%
Public Debt as a Percentage of GDP	116%	81.1%
Interest Rates (central bank base rates, annualized)	435%	5.2%
Foreign Reserves	$792.8 million	$3.05 billion

Source: Steve H. Hanke. "Montenegro, The Next Balkan Hot Spot," Forbes Global, September 6, 1999.